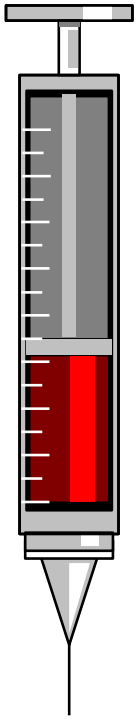
WHAT IS ERGONOMICS?

ERGONOMICS –

The study of the design of work i relation to the physiological and psychological capabilities of people (matching the work place to the work

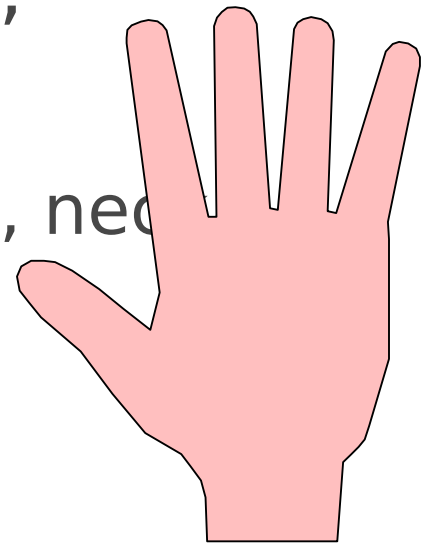
TWO BROAD CATEGORIES OF WORK PLACE DISORDERS EXIST

- INJURIES:
  - THOSE DISORDERS THAT OCCUR DUE TO A ONE-TIME EVENT SUCH AS A CUT, CRUSH OR FALL.
- ILLNESSES:
  - THOSE DISORDERS RELATED TO REPEATED EXPOSURE TO VARIOUS SUBSTANCES, HAZARDS, OR ENVIRONMENTAL CONDITIONS.



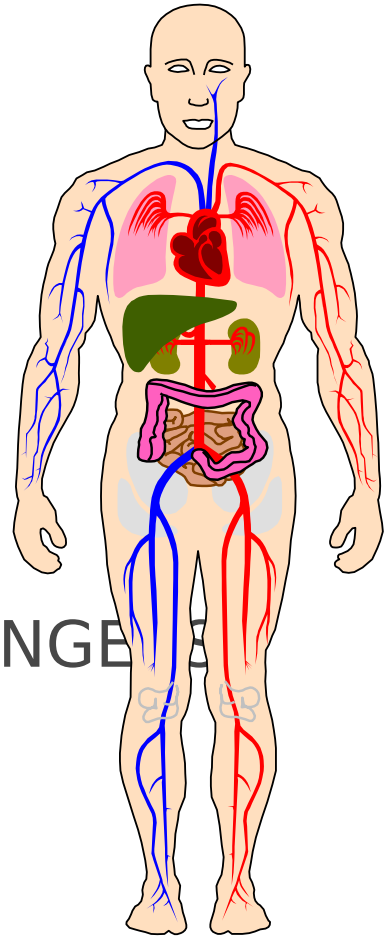
SCOPE OF ERGONOMIC INJURIES

- CUMULATIVE TRAUMA DISORDERS (CTDS) are health disorders arising from repeated biomechanical stress.
- CTD involves damage to the tendons, tendon sheaths, related bones, muscles, and nerves of:
  - Hands, wrists, elbows, shoulders, neck, back.



MORE FREQUENTLY OCCURRING OCCUPATIONALLY INDUCED DISORDERS:

- CARPAL TUNNEL SYNDROME
- TENDONITIS
- TENOSYNOVITIS (INFLAMMATION OF
  - TENDON SHEATH)
- SYNOVITIS (INFLAMMATION OF THE LUBRICATING FLUID OF THE JOINTS)
- STENOSING TENOSYNOVITIS OF THE FINGERS (INFLAMMATION OF TENDON SHEATH)
- LOW BACK PAIN

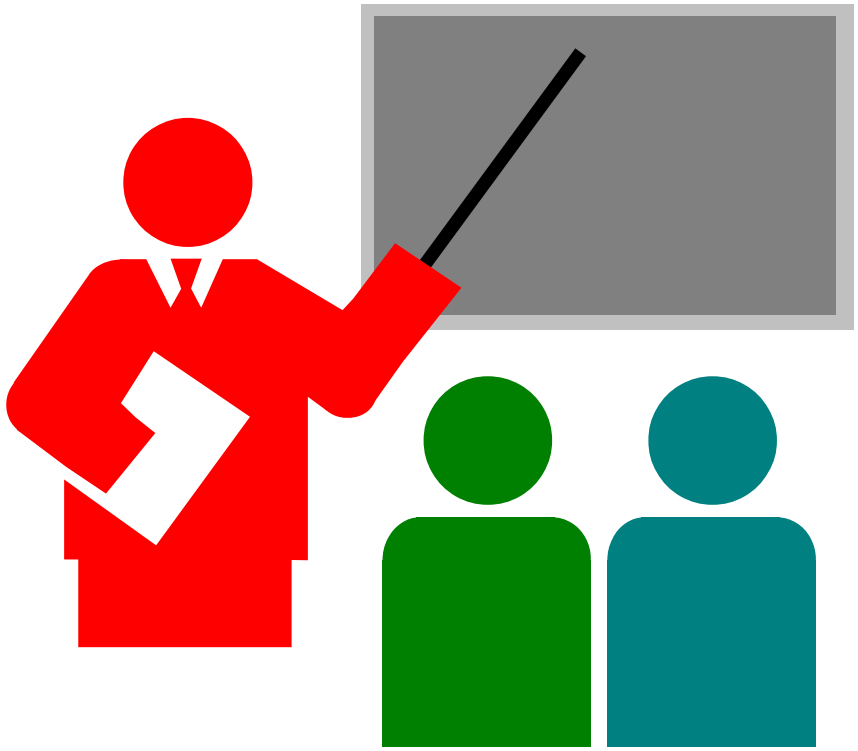


SOME POTENTIAL INDICATORS/SYMPTOMS OF CTDS

- Trends in accidents and injuries
- Incidents of CTD
- Absenteeism
- High turnover rate
- Working conditions noted by people with disabilities
- Complaints about musculoskeletal pain
- High overtime and increased work rate
- Manual material handling/repetitive motion task
- Poor product quality

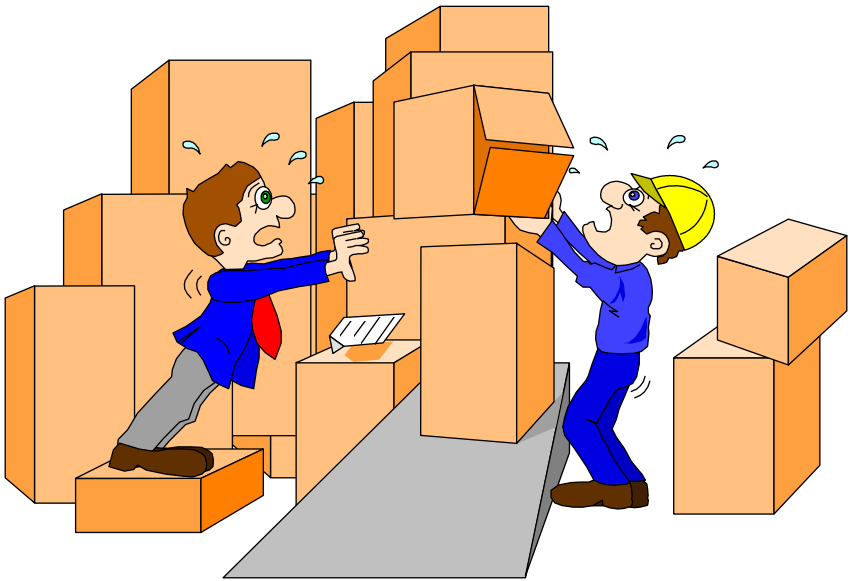
ADMINISTRATIVE CONTROLS

- Controls such as:
  - Rotating personnel to jobs with dissimilar physical requirements
  - Establishing work/rest schedules
  - Training personnel to use appropriate work methods when engineering controls are not feasible



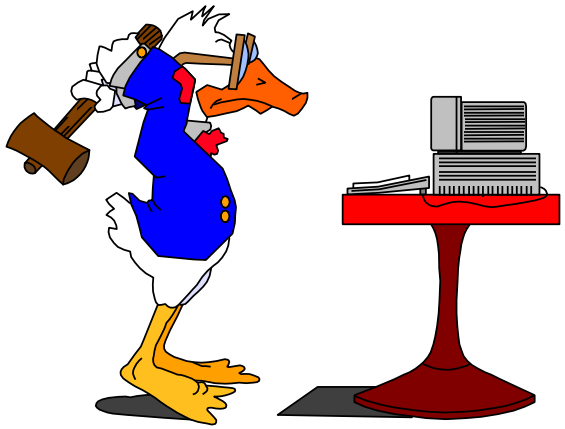
ENGINEERING TECHNIQUES

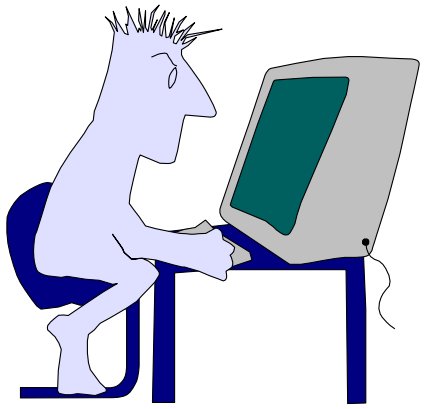
- Engineering techniques are the preferred mechanism for controlling ergonomic hazards. This may entail redesigning the work station, work methods, and tools to reduce the demands of the job, suc as exertion, repetition, a awkward positions.



WORK STATION DESIGN

WORKSTATIONS SHALL BE EASILY ADJUSTIBLE TO ACCOMMODATE THE WORKER PERFORMING THE TASK





TRAINING

ELEMENTS OF TRAINING:

- ERGONOMICS DEFINITION AND CONCEPTS
- CTD AND BACKINJURY PREVENTION
- VARIETIES OF CTD, CAUSES, SYMPTOMS, PREVENTION AND TREATMENT
- ERGONOMIC OF HAND TOOLS
- EQUIPMENT DESIGN, ADJUSTABILITY AND LAYOUT
- PROPER MAINTENANCE OF FACILITIES, EQUIPMENT AND TOOLS AS TECHNIQUES TO MINIMIZE ERGONOMIC STRESS
- HAZARD IDENTIFICATION AND JOB ANALYSIS
- IMPLEMENTATION OF TRAINING
- BACKINJURY PREVENTION TRAINING

BACKINJURY TRAINING

- **SHALL INCLUDE:**

- ANATOMY AND PHYSIOLOGY TO EXPLAIN HOW THE BACK WORKS

- BIOMECHANICS OF LIFTING

- WEIGHT CONTROL

- HOW TO AVOID BACK INJURIES

- PHYSICAL FITNESS

PERSONNEL REQUIRED TO HAVE TRAINING

- **MANAGERS:**

  SHALL RECEIVE SUFFIENT TRAINING ON ERGONOMIC ISSUES TO EFFECTIVELY CARRY OUT THEIR RESPONSIBILITIES FOR HEALTH AND SAFETY OF PERSONNEL.

SUPERVISORS:

- REQUIRE TRAINING TO ENABLE THEM TO RECOGNIZE HAZARDOUS WORK PRACTICES AND SYMPTOMS OF CTD'S

- BACK INJURY PREVENTION TRAINING INCLUDING BENEFITS OF PHYSICAL FITNESS, HEALTH EDUCATION AND LIFESTYLE MODIFICATION IN REDUCING BACK INJURIES